

## List of Figures

Figure S-1 – Cumulative Impact Effect Area .....	v
Figure 1-1 – State Route 99 Improvements.....	1-2
Figure 1-2a – Project Location Map Segment 1 .....	1-3
Figure 1-2b – Project Location Map Segment 2.....	1-4
Figure 1-2c – Project Location Map Segment 4.....	1-5
Figure 2-1 – All Alternatives.....	2-8
Figure 2-2a – Typical Cross Section .....	2-9
Figure 2-2b – Typical Cross Section .....	2-10
Figure 2-2c – Typical Cross Section .....	2-11
Figure 2-3 – Feather River Bridge Cross Section.....	2-12
Figure 3-1a – Locations of Wetlands and Waters Segment 1 .....	3-24
Figure 3-1b – Locations of Wetlands and Waters Segment 2 (Feather River Bridge).....	3-25
Figure 3-1c – Locations of Wetlands and Waters Segment 4 (Tudor Bypass) .....	3-26
Figure 3-2a – Habitat Types and Locations Segments 1 and 2 .....	3-33
Figure 3-2b – Habitat Types and Locations Segment 4 .....	3-34
Figure 3-3a – Impacts to Swainson’s Hawk and Giant Garter Snake Habitat Segment 1 .....	3-51
Figure 3-3b – Impacts to Swainson’s Hawk and Giant Garter Snake Habitat Segment 2 .....	3-52
Figure 3-3c – Impacts to Swainson’s Hawk and Giant Garter Snake Habitat Segment 4 .....	3-53
Figure 3-4 - Floodplains .....	3-79
Figure 3-5a – Feather River Wildlife Area.....	3-84
Figure 3-5b – Impacts to Feather River Wildlife Area.....	3-85
Figure 3-6 – Sutter County Landuse Map .....	3-88
Figure 3-7 – Sutter County Soils Map.....	3-94
Figure 3-8 – Map of Farmlands in Sutter County .....	3-95
Figure 4-1 – Cumulative Effect Study Area.....	4-2
Figure 4-2 – General and Specific Plan Locations (Anticipated Growth Areas) .....	4-6
Figure 4-3 – Proposed Habitat Conservation Plan .....	4-12

## List of Tables

Table S-1 - Summary of Major Potential Impacts From Alternatives .....	iii
Table 1-1 - Traffic Level of Service (LOS) .....	1-1
Table 1-2 - Projected Traffic Demand .....	1-6
Table 1-3 – Segment 3 Accident Rates .....	1-7
Table 1-4 - Accident Rates .....	1-7
Table 2-1 – Right of Way Cost Per Alternative.....	2-6
Table 3-1 – Potential Hazardous Waste Sites Per Alternative.....	3-11
Table 3-2 - Attainment Status of Feather River Air Quality Management District .....	3-15
Table 3-3 - Summary of CO Concentrations .....	3-16
Table 3-4 – Impacted Receptors by Alternative .....	3-17
Table 3-5 - Construction Equipment Noise .....	3-20
Table 3-6 - Amount of Impacts to Wetlands and Waters of the U.S. ....	3-30
Table 3-7 – Pacific Flyway and Riparian Habitat Impacts .....	3-39
Table 3-8-Summary of DFG Mitigation Compensation .....	3-42
Table 3-9 - Special Status Species Known or Potentially Occurring Within The Project Area .....	3-44
Table 3-10 - Summary of Potential Special-Status Species Occurrences within the Project Area.....	3-59
Table 3-11- Giant Garter Snake Impacts .....	3-68
Table 3-11a Swainson's Hawk Impact by alternative.....	3-71
Table 3-11b Alternative 3 – Swainson's Hawk Impact by Segment .....	3-71
Table 3-12 - Incorporated Cities and Rural Communities Zoned Acreage.....	3-87
Table 3-13 - Farmland Classification.....	3-93
Table 3-14 - Farmland Site Assessment .....	3-96
Table 3-15 - Farmland Conversion by Alternative .....	3-97
Table 3-16 - Population in the Project Area. ....	3-100
Table 3-17 - 2000 Taxable Transactions in Sutter County .....	3-102
Table 3-18- Residential Acquisitions by Type and Take .....	3-105
Table 3-19 2019 - Traffic Projections.....	3-118
Table 3-20 - Sutter County Build-Out Projections .....	3-119
Table 4-1 - Cumulative Effects Corridor Projects .....	4-3
Table 4-2 - Urban Developments to be Addressed Under Local HCP .....	4-4
Table 4-3 – Cumulative Impacts to Biological Resources.....	4-8
Table 4-4 - Farmland Impacts by Other Project in Sutter County .....	4-13

## List of Abbreviated Terms

<b>Abbreviation</b>	<b>Term</b>
ac	acre
AC	asphalt concrete
ACOE	US Army Corps of Engineers
ADT	Average Daily Traffic
APE	Area of Potential Effects (Cultural Resources)
BCAG	Butte County Association of Governments
BCM	Butte County Meadowfoam (special status plant)
BMP	Best Management Practices (Water Quality)
Caltrans	California Department of Transportation
CDFG	California Department of Fish & Game
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CO	Carbon Monoxide (Air Quality)
dBA	Decibels (noise level measurement)
DEIR	Draft Environmental Impact Report (CEQA document – State)
DEIS	Draft Environmental Impact Statement (NEPA document – Federal)
EA	Environmental Assessment
EPA	Environmental Protection Agency
ESA	Environmentally Sensitive Area
ESA	Endangered Species Act (federal)
ESU	Evolutionarily Significant Unit
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FPPA	Farmland Protection Policy Act
ft	foot / feet
FTIP	Federal Transportation Improvement Program
ha	hectare
HPSR	Historic Property Survey Report (cultural resources)
IS	Initial Study
Km	kilometer
KP	Kilopost
L <sub>eq</sub>	Equivalent Noise level
LOS	Level of Service
m	meter
mi	mile
MTP	Metropolitan Transportation Program
MOU	Memorandum of Understanding
NAC	Noise Abatement Criteria
NEPA	National Environmental Policy Act
NES	Natural Environment Study (Biological Resources)

NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NOAA Fisheries	National Oceanographic Atmospheric Administration
NOP	Notice of Preparation
NRCS	Natural Resources Conservation Service
PG&E	Pacific Gas and Electric
PM	Postmile
ppm	Parts per million
PRC	Public Resources Code (State)
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Area Council of Governments
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SR	State Route
STIP	State Transportation Improvement Plan
TASAS	Traffic Accident and Surveillance Analysis System
TMP	Traffic Management Plan
TDM	Travel Demand Management
TSM	Transportation System Management
USC	United States Code
USEPA	US Environmental Protection Agency
USFWS	US Fish & Wildlife Service
UST	Underground storage tank (hazardous materials)

